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[54] METHOD FOR FABRICATING SEMICONDUCTOR THIN FILM

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[58] Field of Search 438/166, 402, 438/476, 150, 151, 152

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[57] ABSTRACT

An object of the present invention is to provide a technology of reducing a nickel element in the silicon film which is crystallized by using nickel. An extremely small amount of nickel is introduced into an amorphous silicon film which is formed on the glass substrate. Then this amorphous silicon film is crystallized by heating. At this time, the nickel element remains in the crystallized silicon film. Then an amorphous silicon film is formed on the surface of the silicon film crystallized with the action of nickel. Then the amorphous silicon film is further heat treated. By carrying out this heat treatment, the nickel element is dispersed from the crystallized silicon film into the amorphous silicon film with the result that the nickel density in the crystallized silicon film is lowered.

6 Claims, 9 Drawing Sheets

IMPURITY ION IMPLANTATION AND LASER LIGHT IRRADIATION